

he had tremors of the hands, and that he could not hold a cup steadily. Convulsions with cramps ensued. The pulse was slow, the look timid, the pupil dilated, and the countenance pale. Delirium supervened, and there was dysuria, with great thirst. A cataplasm was applied to the abdomen, and calomel and jalap were administered. The symptoms abated about the middle of the day, but toward evening, there was a return of the tremors with other nervous symptoms. An opiate was exhibited, from the effects of which, the child slept soundly, and on awaking, the whole of the symptoms had disappeared.—*Ibid.*, from *Gazette des Hopitaux*.

T. R. B.

66. *On the Echites suberecta.* By Dr. W. HAMILTON.—This plant is a native of Jamaica and Hayti, a shrub, with a weakly twining stem, supporting itself by means of the bushes, to a height of ten or more feet, and showing large golden blossoms in the months of July, August, and September.

The milk of this plant is a most deadly poison, and often fatal to cattle that browse upon it. Lunau states, that he saw two drachms given to a dog, which proved fatal in eight minutes. But its exhibition may be so managed, as to sap the constitution by slow and imperceptible degrees, so as, without awakening suspicion, to accomplish its object with greater certainty. Lunau gives the case of a medical practitioner in Jamaica, who was practised upon in this way by a negro woman, who appears, however, to have used it too largely for concealment, as it produced violent griping, nausea and loss of appetite, followed by convulsive twitchings in various parts of his body, hectic fever, and emaciation. Lunau on being applied to for his advice, sent him some cocoons of the *Feuillea*, which he directed him to take infused in wine, frequently in the course of the day, by which means the deleterious effects of the Echites were counteracted, and health ultimately restored, although it was a long time before the disposition to spasm was wholly subdued.

Dr. Barham gives another remarkable case, in which the effects of this plant were counteracted by the timely exhibition of the expressed juice of the root of the Maranta arundinacea, or arrowroot. It appears that an ignorant negro on a plantation about a league distant from Spanish Town, being at a loss for a cork, employed a piece of the stem of the Echites suberecta, to stop a jar of rum, which was left in that condition, and with some of the leaves which had dropped in, all night. Of this rum, some of the negroes partook in the morning, and were in the course of a few hours, seized with a violent vomiting, and tremors. An alarm was immediately raised that they were poisoned, and the owner of the plantation hastened, accompanied by the surgeon who attended it, to the spot, but on his arrival, he found that some were dead, and another just expiring. Nobody could explain the cause, but somebody present having suggested the arrowroot, it was procured, the juice expressed from the root, and administered with the happiest effects. Immediately after drinking the first glassfull, the negro who was at the point of death revived; the second brought him completely to himself.

Dr. Hamilton suggests the importance of an analysis of this plant.—*Pharmaceutical Journal*, July, 1846.

T. R. B.

67. *Vapours of Phosphorus, Lucifer Matches.*—M. DUPASQUIER, from numerous observations, arrives at the following results.

1. That the vapours of phosphorus do not produce on workmen the serious effects ascribed to them. 2. That they only excite a moderate bronchial irritation which soon yields in consequence of the mucous membrane becoming accustomed to the contact of these vapours.

Such are his conclusions, deduced from observations made at the factories in Lyons. M. Dupasquier does not deny that more serious effects have been noticed in the German factories and in those established in the suburbs of Paris, but he attributes such to other causes than the influence of phosphoric vapours. Possibly they may be owing to the addition of arsenious acid to the phosphoric paste.

In spite of the express directions of the Committee of Health of Paris, not to employ arsenic in the manufacture of Lucifer matches, he has ascertained that the manufacturers use it in the proportion of at least one-fourth of the whole materials employed. A clerk in an extensive druggist establishment at Paris, informed M.

Dupasquier that it was quite common to sell these materials made up, and the receipt was equal parts by weight of phosphorus, chlorate of potash, arsenic in powder, and powdered gum Arabic. Another clerk stated to him, that the drug-gists are in the constant habit of selling arsenic to the makers of lucifer matches.

The above opinions are rendered highly probable from the fact that the manufacturers at Lyons do not employ arsenic. The well known stimulant action of phosphorus, when taken internally, on the genital organs, led him to suppose that a similar result would occur on constant exposure to its vapours, but M. Dupasquier was surprised to find that no indication of this had in any case been noticed at Lyons.—*Comptes Rendus*, August 31, 1846.

T. R. B.

68. *On the mode of testing the presence of minute quantities of Alcohol.* By ROBERT D. THOMSON, M. D., Lecturer on Practical Chemistry in the University of Glasgow.—The determination of the presence of minute quantities of alcohol is a chemical point of some importance, especially in judicial cases. The usual method hitherto adopted for detecting alcohol in mixed fluids, is to subject the fluid suspected to contain it to distillation, at a temperature not greater than that which is required to cause the alcohol to pass over into a receiver and then to judge of the presence of spirit by the vinous odour of the distilled fluid. When alcohol, in the form of gin, whisky or brandy, &c., has been swallowed, if death takes place within a short period of the introduction of the fluid, the odour of the spirituous liquors will be distinctly perceptible to one inspecting the interior of the stomach, but if a considerable time should elapse, as, for example, a few hours between the introduction of the spirit and death, it is rarely found that the smell can be detected. Again, if the person should die under the influence of spirituous liquors and the stomach were not examined within a limited period, the odour of alcohol might not be perceptible, since as absorption goes on for several hours after death, and as volatile fluids appear to be peculiarly susceptible of rapid absorption, the whole of the alcoholic fluid might be removed from the intestinal canal into the circulation. It has been affirmed that alcohol has been detected in the brain of gin drinkers, but as the mode of testing adopted was merely the impression made upon the nerves of smell, we may perhaps be allowed to doubt the accuracy of the experiment. It has been affirmed that the gin obtained from the brain has been inflamed, and if this were correct, we should then be entitled to quote nasal and ocular proofs of the presence of alcohol in the brain, but as the gin of the shops is so weak that, in its natural state, it will scarcely burn, we may also be permitted to be skeptical in reference to this second proof. These views do not tend to disprove the possibility of the presence of alcohol in the vessels of the brain and other portions of the body, because we know that hydrocyanic acid passes to the very extremities of the body and can be distinctly detected by its odour, until it has been either removed from the system by the combustion of respiration, or simply by exhalation from the lungs. Now alcohol and hydrocyanic acid are somewhat analogous in a chemico-physiological point of view, as they possess a powerfully sedative effect upon the system, are exceedingly volatile, readily absorbable, and require much oxygen to resolve them into simpler forms. For these reasons, it appears highly probable that alcohol may be capable of detection in the vessels of the system when it has been swallowed in large quantities. The experiment could, however, only be made on the inferior animals, and we should require some more definite test than the mere smell of the alcohol.

There are other circumstances, in a judicial point of view, in which it may be of importance to detect minute quantities of alcohol. For example, to distinguish small portions of the liquid preparations of opium. In medicine, there are used the solution of opium in alcohol; the solution of opium in wine; the solution of opium in alcohol with benzoic acid and ammonia; the solution of opium in vinegar; and, lastly, the solution in water. When these preparations are entire, there is not much difficulty in their discrimination, but if they have been exposed to the air, much of the alcohol escapes, and they may all become analogous to a solution of opium in water. To distinguish those which contain alcohol from those which do not, enables us to divide them into two classes, and thus to simplify the inquiry. For these, and many other cases, where minute detection is necessary, I have been in the habit, for some years, of employing a method which depends upon a